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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/726,179 | 12/02/2003 | Robert S. Oswald | 37,235-03 | 2573 |
| 7590 | 04/18/2005 | | EXAMINER | |
| BP America Inc. Docket Clerk, BP Legal, M.C. 5East 4101 Winfield Road Warrenville, IL 60555 | | | HOANG, QUOC DINH | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2818 | |

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/726,179 | OSWALD ET AL. | |
| | Examiner | Art Unit | |
| | Quoc D. Hoang | 2818 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 November 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 28-36 and 41-44 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 28-36 and 41-44 is/are rejected.
 7) Claim(s) 32 and 33 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 28-36 and 41-44 are withdrawn in view of the newly discovered reference(s) to Catalano et al (U.S. Pat No. 4,667,058). Rejections based on the newly cited reference(s) follow.

Claim Objections

2. Claims 32 and 33 are objected to because of the following informalities: "transmission" should be --transmission of light--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 28-31, 34, 35, 43 and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Catalano et al (U.S. Pat No. 4,667,058) (hereafter Catalano).

Regarding claim 28, Catalano teaches a thin film partially transparent photovoltaic module 10 comprising series-connected cells, at least one amorphous semiconductor layer 18', a metal contact layer 22', and interconnects connecting the series-connected cells, the module comprising a plurality of scribes 28 at least through the metal contact layer 22' positioned in a direction that crosses the direction of the interconnects (col. 3, line 29 through col. 5, line 21, and Figs. 1-5).

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Regarding claims 29-31, Catalano teaches wherein each scribe 28 has a width of about 0.025 to about 0.05 mm (col. 5, lines 21-40, and Fig. 3).

Regarding claims 34 and 35, Catalano teaches wherein scribes 28 are in the form of connected holes or grooves, and has a width of about 0.025 to about 0.05 mm (col. 5, lines 21-40, and Fig. 3).

Regarding claim 43, Catalano teaches wherein the scribes 28 are grouped in bands of closely spaced scribe lines separated by bands having few or no scribes (Fig. 3).

Regarding claim 44, Catalano teaches wherein the distance between at least a portion of the scribes 28 is graded (see Fig. 3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 32, 33, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Catalano et al (U.S. Pat No. 4,667,058) (hereafter Catalano) in view of Berman et al (U.S. Pat No. 4,663,495) (hereafter Berman).

Catalano does not teach module having a transmission of at least about 10 percent.

However, regarding claims 32 and 33, Berman teaches a photovoltaic module 10 having a transmission of at least about 10 percent (col. 8, lines 62 through col. 9, line

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13). At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the photovoltaic module having a transmission teaching of Berman with Catalano's device, because it would have reduced the space requirement as taught by Berman, column 13, lines 52-62.

Regarding claims 41 and 42, Berman teaches a window or sun screens comprising the photovoltaic module 10 (col. 3, lines 65-67).

7. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Catalano et al (U.S. Pat No. 4,667,058) (hereafter Catalano) in view of Spear (U.S. Pat No. 4,400,577).

Catalano does not teach module having a bus bars located adjacent to the first and last cell in the module.

However, Spear teaches a photovoltaic module having an electrical contact or "bus bars" 52 located adjacent to the first and last cell in the module and outside the conductive area or "metal contact layer" 57 (col. 8, lines 19-46 and Fig. 10). At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the bus bars teaching of Spear with Catalano's device, because it would have provided electrical contact to other devices as taught by Spear, column 8, lines 19-46.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc Hoang whose telephone number is (571) 272-1780. The examiner can normally be reached on Monday-Friday from 8.00 AM to 5.00 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone numbers of the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Quoc Hoang
Patent examiner/AU 2818


David Nelms
Supervisory Patent Examiner
Technology Center 2800